REISSUE APPLICATION DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name, I believe I am the original, first and sole inventor of the subject matter which is described and claimed in letters patent number 5,302,966 entitled ACTIVE MATRIX ELECTROLUMINESCENT DISPLAY AND METHOD OF OPERATION and granted on APRIL 12, 1994 and for which invention I now solicit a reissue patent, the specification for which:

_X_ is attached hereto.

___ was filed on _____ as
Application Serial No. _____
with amendment(s) filed _____

ACKNOWLEDGMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above-identified specification including the claims, as amended by any amendments referred to above.

I acknowledge the duty to disclose information which is material to the examination of this reissue application in accordance with Title 37, Code of Federal Regulations section 1.56 (a).

PRIORITY CLAIM

I hereby claim foreign priority benefits under Section 119 of Title 35, United States Code for the above-identified reissue patent application based on the foreign application(s) for patent or inventor's certificate identified below and having a filing date before that of the application on which priority is claimed:

Application No	Country	Filing Date	Priority Claimed under 35 USC 119

NONE

STATEMENT OF INOPERATIVENESS OR INVALIDITY OF ORIGINAL PATENT UNDER 37 CFR 1.175

I believe that the original patent identified above is partly invalid by reason of the patentee claiming less than he had a right to claim through error that arose without any deceptive intention on the part of the applicant.

The present claims, claims 1-7 of the subject patent 5,302,966, are narrowly drafted to specifically claim a single arrangement of components within a pixel of an electroluminescent display. Although this specific arrangement of components is useful in providing gray scale illumination of a pixel in an electroluminescent display, I believe that I am entitled to broader claim coverage including (1) a

method of providing gray scale illumination for a pixel of an electroluminescent display, (2) apparatus for implementing the method using an analog data signal, (3) apparatus for implementing the method using a digital data signal, and (4) a unique arrangement of pixel components useful in attaining gray scale illumination of a pixel.

Specifically, the error includes an omission of certain claims to a method for providing gray scale illumination for an electroluminescent display using either analog or digital data signals. In particular, the applicant's specification discloses on page 1, lines 13-57, a method that subdivides a frame period into a plurality of LOAD and ILLUMINATE periods, where each LOAD period is followed by an ILLUMINATE period. During each LOAD period, data is stored in a circuit within each pixel and, during each ILLUMINATE period, a current is applied to the circuit and to the electroluminescent cell. In response to the applied current and the stored data signal, the electroluminescent cell is selectively illuminated. The gray scale illumination is accomplished either by using analog or digital data signals. This omitted method of the invention is now claimed in claims 8-13 of the Reissue Application.

Further, the error includes an omission of certain claims to apparatus for implementing the method for providing gray scale illumination for an electroluminescent display using an analog data signal. Such apparatus is disclosed on page 3, line 57 through page 4, line 11 of the applicant's specification. This apparatus is embodied in a pixel design within an electroluminescent display. Specifically, a pixel within the display comprises a first transistor, a second transistor, a power supply, and an electroluminescent cell. The first and second transistors are interconnected as follows:

> the first transistor having a first transistor gate, a first transistor source and a first transistor drain, where the first transistor gate is connected to a select line, the first transistor source is connected to a data line and the first transistor drain is connected to a second transistor gate of the second transistor;
>
> the second transistor having the second transistor gate, a second transistor source and a second transistor drain, where the second transistor source is connected to the data line and the second transistor drain is connected to an electroluminescent cell.

During a LOAD period and when a select line signal on the select line activates the first transistor, the data line supplies, through the first transistor, a data signal to the second transistor gate where the data signal is stored. Thereafter, during an ILLUMINATE period, the data line supplies an analog gray scale control signal (typically a ramp signal) to the second transistor such that when the data signal stored at the second transistor gate exceeds the gray scale control signal on the data line, the second transistor applies energy from a power supply to the electroluminescent cell. In this manner, the gray scale control signal as compared to the stored analog data signal determines an amount of time during a frame period that a pixel is illuminated. This apparatus is now specifically recited in claims 14-19 in the Reissue Application.

Further, the error includes an omission of certain claims to apparatus for implementing the method for providing gray scale illumination for an electroluminescent display using a digital data

signal. Such apparatus is disclosed on page 4, lines 12-58 of the applicant's specification. This apparatus is embodied in a pixel within an electroluminescent display. Specifically, a control circuit is connected to a data line, a select line, and an electrode of an electroluminescent cell. During a LOAD period and when a select line signal on the select line activates the control circuit, a data signal supplied by the data line is stored within the circuit. Subsequently, during an ILLUMINATE period, the control signal, in response to the state of the data signal, applies pulsed energy to the electroluminescent cell for a particular period of time. This apparatus is now specifically recited in claims 20-29 in the Reissue Application.

Lastly, the error includes an omission of certain claims to apparatus for implementing the method for providing gray scale illumination for an electroluminescent display using a particular pixel component arrangement. Such apparatus is disclosed on page 4, line 59 through page 5, line 2 and Figure 3 of the applicant's specification. Specifically, the pixel contains a first transistor, a second transistor, and an electroluminescent cell. The first transistor has its gate connected to a select line, its source connected to a data line, and a drain connected to the gate of the second transistor. Additionally, the source of the second transistor is connected to a data line, and the drain of the second transistor is connected to a first electrode of the electroluminescent cell. The electroluminescent cell is also connected, through a second electrode, to an AC power supply. This pixel apparatus is now specifically recited in claims 30-32 in the Reissue Application.

The forgoing omissions arose at the time the application was prepared and during prosecution of the application because, on information and belief, that my former United States attorney did not realize the possible breadth of the protection to which the invention was entitled.

On information and belief, the errors did not become apparent until after review of the issued patent was undertaken for purposes of determining whether the claims accurately reflect the scope of the invention. The possibility of an error was originally discovered, on or about December 10, 1994, when I was reviewing the patent with a view towards licensing the patent. The breadth of the patent was then reviewed, on or about December 15, 1994, by Raymond R. Moser, Esq. and Dr. William Burke, Esq. They concluded that I had claimed less than I had a right to claim.

As a result of this review by Mr. Moser and Dr. Burke, it was concluded that the subject patent is defective. In response, applicant's assignee authorized the law firm of Thomason & Moser to prepare and file a reissue application for the subject patent including broadened claims commensurate with the scope of the disclosed invention.

Through error, I failed to present claims in the subject patent 5,302,966 that are now contained in the Reissue Application. This error arose without deceptive intent on my part.

POWER OF ATTORNEY

As a named inventor, I hereby appoint:

Charles L. Thomason (Reg. No. 31,431) and

Raymond R. Moser Jr. (Reg. No. 34,682)

as my attorneys to prosecute this application and to transact all business in the United States Patent and Trademark Office in connection therewith.

Direct all correspondence to:

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Inventor:

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Signature: Roger G. Stewart

Date: May 18, 1995

IN THE UNITED STATES PATENT
AND TRADEMARK OFFICE

In re Reissue application of:

Inventor: Roger G. Stewart

for the reissue of U.S. Patent 5,302,966

The Commissioner of Patents and Trademarks
Washington, D. C. 20231

Sir:

ASSENT OF ASSIGNEE TO REISSUE

In accordance with the provisions of 37 CFR 1.172, the undersigned, assignee of the entire interest in the letters patent for ACTIVE MATRIX ELECTROLUMINESCENT DISPLAY AND METHOD OF OPERATION, United States Patent number 5,302,966 granted on APRIL 12, 1994, hereby assents to filing of the accompanying reissue application therefor, and further assents to filing of the reissue declaration by the inventor thereof.

DAVID SARNOFF RESEARCH CENTER, INC.

May 18, 1995
Date

By: William J Burke

Name: WILLIAM J. BURKE

Title: ASSISTANT SECRETARY